CONCLUSION

On the basis of the foregoing amendments, Applicants respectfully submit that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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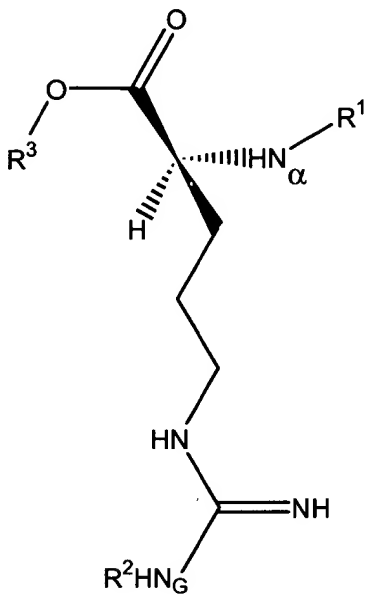
VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. A compound of the formula (I)



(I)

wherein R^1 is a protecting group for Nα;

R^2 is a protecting group for N_G; and

R^3 is aryl; and

wherein the compound of formula (I) is a trypsin substrate such that trypsin cleaves the O-C single bond, which liberates R^3-OH.

2. The compound of claim 1 wherein R^1 is selected from the group consisting of acyl, arene sulfonyl, and carbamoyl derivatives.

3. The compound of claim 1 wherein R^1 is selected from the group consisting of t-butyloxycarbonyl and derivatives, benzyloxycarbonyl and derivatives, benzoyl and derivatives, and benzene sulfonyl and derivatives.

4. The compound of claim 1 wherein R^2 is selected from the group consisting of nitro, arene sulfonyl, carbamoyl, and acyl.

5. The compound of claim 1 wherein R^2 is selected from the group consisting of nitro, benzene sulfonyl and derivatives, tosyl, carbobenzyloxy and derivatives, and benzoyl and derivatives.

6. The compound of claim 1 wherein R^3 comprises a heterocyclic aromatic moiety.

7. The compound of claim 6 wherein R^3 is a fused ring system.

8. The compound of claim 1 wherein R^3 is carbocyclic.

9. (Amended) The compound of claim 8 wherein R^3 is 1-napthhthol and derivatives thereof.

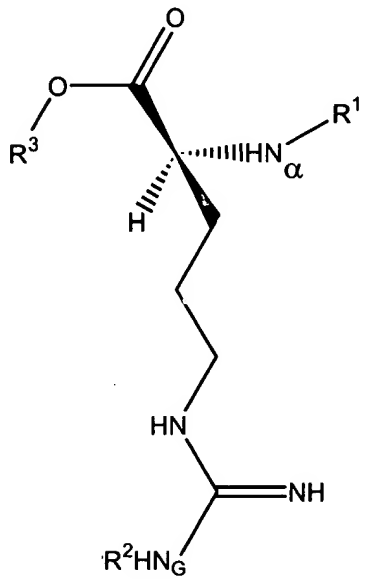
10. The compound of claim 1 wherein R^3 is selected from the group consisting of phenylpyrrole and derivatives thereof, coumarin and derivatives thereof, phenylthiophene and derivatives thereof, indole and derivatives thereof, and 2-phenyl-5H-thiazol and derivatives thereof.

11. The compound of claim 1 wherein R^3-OH is optically distinct from the compound of formula (I).

12. (Canceled) A diagnostic device comprising:

a carrier matrix; and

a compound of the formula (I)



(I)

wherein R^1 is a protecting group for Nα;

R^2 is a protecting group for N_G; and

R^3 is aryl; and

wherein the compound of formula (I) is a trypsin substrate such that trypsin cleaves the O-C single bond, which liberates R^3-OH.

13. (Canceled) The diagnostic device of claim 12 wherein R^1 is selected from the group consisting of acyl, arene sulfonyl, and carbamoyl derivatives.

14. (Canceled) The diagnostic device of claim 12 wherein R^1 is selected from the group consisting of t-butyloxycarbonyl and derivatives, benzyloxycarbonyl and derivatives, benzoyl and derivatives, and benzene sulfonyl and derivatives.

15. (Canceled) The diagnostic device of claim 12 wherein R^2 is selected from the group consisting of nitro, arene sulfonyl, carbamoyl, and acyl.

16. (Canceled) The diagnostic device of claim 12 wherein R^2 is selected from the group consisting of nitro, benzene sulfonyl and derivatives, tosyl, carbobenzyloxy and derivatives, and benzoyl and derivatives.

17. (Canceled) The diagnostic device of claim 12 wherein R^3 comprises a heterocyclic aromatic moiety.

18. (Canceled) The diagnostic device of claim 17 wherein R^3 is a fused ring system.

19. (Canceled) The diagnostic device of claim 12 wherein R^3 is carbocyclic.

20. (Canceled) The diagnostic device of claim 19 wherein R^3 is 1-naththol and derivatives thereof.

21. (Canceled) The diagnostic device of claim 12 wherein R^3 is selected from the group consisting of phenylpyrrole and derivatives thereof, coumarin and derivatives thereof, phenylthiophene and derivatives thereof, indole and derivatives thereof, and 2-phenyl-5H-thiazol and derivatives thereof.

22. (Canceled) The diagnostic device of claim 12 wherein the carrier matrix is filter paper.

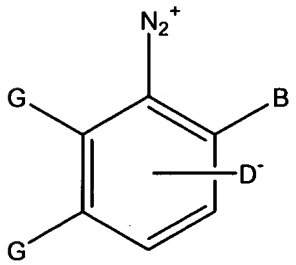
23. (Canceled) The diagnostic device of claim 12 wherein the carrier matrix contains a diazonium salt.

24. (Canceled) The diagnostic device of claim 23 wherein R^3-OH reacts with a diazonium salt to form a visible color.

25. (Canceled) The diagnostic device of claim 23 wherein the diazonium salt has the structure:
R^4-N_2^+ An^-
wherein R^4 is aryl; and
wherein An^- is an anion.

26. (Canceled) The diagnostic device of claim 25 wherein R^4 is morpholinobenzene and derivatives thereof.

27. (Canceled) The diagnostic device of claim 23 wherein the diazonium salt is a zwitter ion having the structure



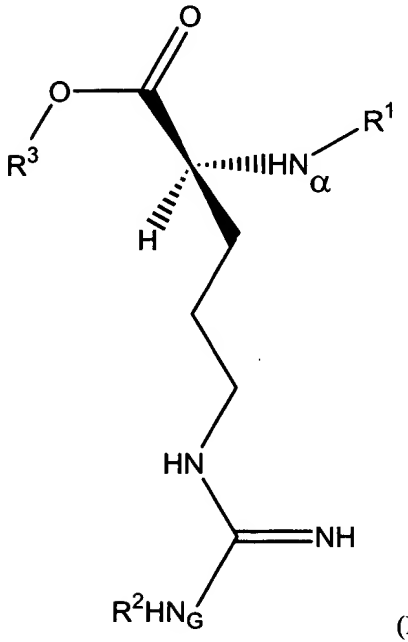
wherein D^- is an anion;

wherein G is independently H, C_{1-6} alkyl, or in which the two G moieties together form a fused ring system; and

wherein B is H or OH.

28. (Canceled) The diagnostic device of claim 12 wherein R^3-OH is optically distinct from the compound of formula (I).

29. (Canceled) A method of preparing a diagnostic device, the device comprising a carrier matrix and a trypsin substrate of formula (I)



(I)

wherein R^1 is a protecting group for Nα;

R^2 is a protecting group for N_G; and

R^3 is aryl; and

wherein the compound of formula (I) is a trypsin substrate such that trypsin cleaves the O-C single bond, which liberates R^3-OH;

the method comprising:

(a) contacting a carrier matrix with a buffer solution;

(b) drying the carrier matrix; and

(c) contacting the carrier matrix with a solution comprising the trypsin substrate of formula (I).

30. (Canceled) The method of claim 29 further comprising (d) drying the carrier matrix.

31. (Canceled) The method of claim 29 wherein the carrier matrix is filter paper.

32. (Canceled) The method of claim 29 wherein the carrier matrix comprises a diazonium salt.

33. (Canceled) The method of claim 32 wherein R^3-OH reacts with the diazonium salt to form a visible color.

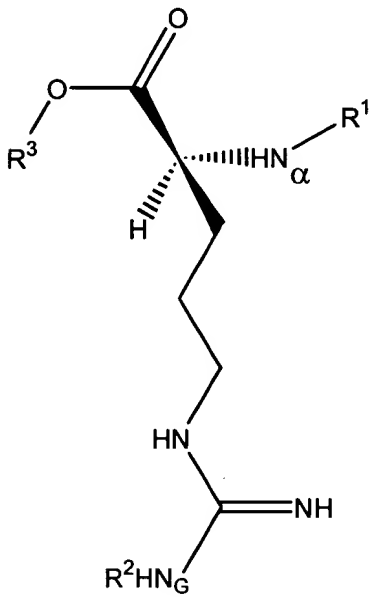
34. (Canceled) The method of claim 25 wherein the solution comprising the trypsin substrate of formula (I) further comprises a diazonium salt.

35. (Canceled) The method of claim 29 wherein R^3-OH reacts with the diazonium salt to form a visible color.

36. (Canceled) The method of claim 29 wherein R^3-OH is optically distinct from the compound of formula (I).

37. (Canceled) A method for detecting levels of urinary trypsin inhibitor in a biological sample comprising:

contacting a biological sample with a predetermined amount of trypsin, a predetermined amount of a diazonium salt, and a diagnostic device comprising a trypsin substrate of the formula (I)



(I)

wherein R^1 is a protecting group for Nα;

R^2 is a protecting group for N_G; and

R^3 is aryl; and

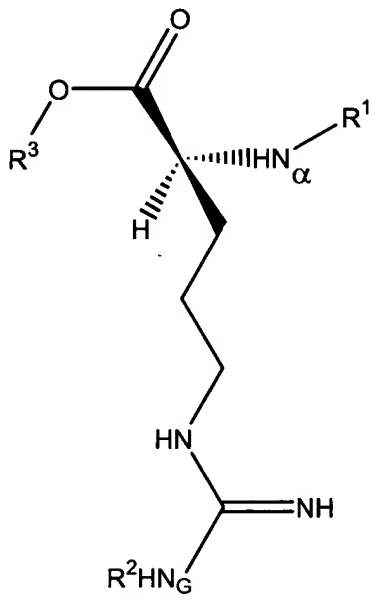
wherein the compound of formula (I) is a trypsin substrate such that trypsin cleaves the O-C single bond, which liberates R^3-OH; and

wherein the compound R^3-OH reacts with a diazonium salt to form a visible color such that the greater the intensity of the color, the less urinary trypsin inhibitor is in the biological sample.

38. (Canceled) A diagnostic kit for determining the presence of urinary trypsin inhibitor in a biological fluid, the kit comprising:

(a) trypsin; and

(b) a trypsin substrate of the formula (I)



(I)

wherein R^1 is a protecting group for Nα;

R^2 is a protecting group for N_G; and

R^3 is aryl; and

wherein the compound of formula (I) is a trypsin substrate such that trypsin cleaves the O-C single bond, which liberates R^3-OH.

39. (Canceled) The diagnostic kit of claim 38 wherein R^3-OH is optically distinct from the trypsin substrate.

40. (Canceled) The diagnostic kit of claim 38 wherein further comprising: (c) at least one reagent capable of being used to determine the presence of urinary trypsin inhibitor.

41. (Canceled) The diagnostic kit of claim 40 wherein the reagent is a diazonium salt.

42. (New) The compound of claim 1 wherein R^1 is arene sulfonyl or a derivative thereof; R^2 is nitro; and R^3 is phenylpyrrole or a derivative thereof.

43. (New) The compound of claim 42 wherein R^1 is *p*-toluenesulfonyl (tosyl).

42. (New) The compound of claim 42 wherein the compound has the formula